



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,373	12/21/2001	Satoshi Takechi	108077-00001	1756

7590 09/29/2003

ARENT FOX KINTNER PLOTKIN & KAHN, PLLC  
SUITE 400  
1050 CONNECTICUT AVENUE, N.W.  
WASHINGTON, DC 20036-5339

EXAMINER
----------

ASHTON, ROSEMARY E

ART UNIT	PAPER NUMBER
----------	--------------

1752

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/024,373

Applicant(s)

TAKECHI ET AL.

Examiner

Rosemary E. Ashton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11-14, 20-45, 51-54, 56-69 and 71 is/are pending in the application.
- 4a) Of the above claim(s) 11-14, 20-35, 46-57, 59-61, 63, 65, 67 and 71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36, 37, 41, 42 and 58 is/are rejected.
- 7) ☒ Claim(s) 38-40, 43-45, 62, 64, 66, 68 and 69 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/365,407.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

The instant application is a child of US serial number 08/365,407 filed December 28, 1994, now abandoned.

#### ***Claim Objections***

1. Claims 38,39,40 are objected to because of the following informalities: Claim 38 does not define R5. Claim 39 does not define R6. Claims 40 does not defined R5 or R6. Appropriate correction is required.

#### ***Election/Restrictions***

2. Applicant's election without traverse of Group V in Paper No. 6 is acknowledged.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 36,37,58 are rejected under 35 U.S.C. 102(b) as being anticipated by Vogel et al U.S. patent no. 5,102,771 cited on applicant's IDS.

Example 22 in col. 15 of Vogel is shown below. It teaches a polymer of itaconic anhydride and tetrahydropyranyl methacrylate that meets the limitations of claims 36 and 37 when I is 0. The polymer is combined with diphenyliodonium hexafluorophosphate which is a photoacid generator as in claim 36. As shown in example 2 the composition is used to form a positive pattern by coating on a substrate, heating, exposing, heating and developing.

Art Unit: 1752

**EXAMPLE 22**

**This example describes the synthesis of poly(itaconic anhydride-co-tetrahydropyran-2-yl methacrylate).**

**A solution of 3.0 g tetrahydropyran-2-yl methacrylate, 0.65 g itaconic anhydride, and 0.038 g AIBN in 3 ml of MEK was heated to 60° C. for 24 hr. An additional 2 ml MEK was added and this solution was used for further evaluation. A coating formulation was prepared from: 0.5 ml above solution, 1.5 ml Gantrez TM AN-139 (as a 10 wt % solution in MEK), 0.078 g diphenyliodonium hexafluorophosphate, 0.039 g 9,10-dithoxyanthracene, and 4.4 ml MEK.**

**Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 41,42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vogel et al cited above.

Vogel does not teach the amount of each monomer in the polymer, however, it would have been obvious to one of ordinary skill in the art to adjust the monomer content to obtain a polymer for a photosensitive composition because such methods are well known in the art. As stated in MPEP

2144.05:

*Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).*

**BEST AVAILABLE COPY**

**BEST AVAILABLE COPY**

Art Unit: 1752

***Allowable Subject Matter***

7. Claims 38-40,43-45,62,64,66,68,69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not teach photosensitive compositions having the polymers in claims 38-40, the protective coating in claim 62 or the solvents in the remaining claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosemary E. Ashton whose telephone number is 703-308-2057. The examiner works a flexible work schedule and can normally be reached M-F between 10:00 am – 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached at 703-308-2303.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Rosemary E. Ashton  
Primary Examiner  
Art Unit 1752

rea  
September 22, 2003

**ROSEMARY ASHTON  
PRIMARY EXAMINER**